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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,176	09/03/2003	Bycong Yong Lee	7989.011.00-US	3030
30827	7590	09/13/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/653,176

Applicant(s)

LEE ET AL.

Examiner

Philip H. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 2 and 5-7 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 12, 17, 18 and 22 of the copending divisional Application No. 10/981,574. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims as amended in the two applications are both directed to a combined microwave oven with a toaster comprising a heater, input for selecting a toaster function defining the food type and desired toasting level, a memory storing a voltage level as a function of the heater and the toaster function, a temperature sensor for sensing the inside of the toaster, a time counter for measuring the amount of time that has elapsed since the previous toaster operation and a microcomputer for controlling a heating time period by combining a first, a seconds and a third time period (compare, claim 2 with claim 12 of the divisional application). Similarly, the method recited in claims 5-7 and 10 are also directed to a method of operating a combined toaster and a microwave oven having substantially

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the same steps as claimed in claims 17, 18 and 22 of the divisional application. In view of the overlapping subject matter as now claimed in this application and the parent application, the species election requirement mailed 9-10-2004 is hereby withdrawn. Furthermore, the claims in this application is broader in scope than the now allowed copending application as it does not require that the voltage be set by the manufacturer as recited in the claims of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art as shown in Figure 2 (APA), in view of Hara (JP 6-141982) or Wanat et al (US 5,802,957) and further in view of Devlin (US 5,126,536) (all previously cited).

The Admitted Prior Art as shown in Figure 2 and discussed in paragraphs [0008]-[0014] shows a microwave oven with a toaster including “a control panel 26 in an upper part of front surface of the cavity door 24, provided with a first selection part 26a for selecting functions of the microwave oven, and a second selection part 26b for selecting a toaster function, and a display part 26c for displaying an operation state for a key input at the first selection part 26a or the second selection part 26b”. Therefore APA carries out “a function of a signal received from

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the first or second selection part 26a or 26b of the control panel 26, for setting a toasting time period related to a kind of bread and a level of bread toasting the user selected". APA does not show the use of a temperature sensor for controlling the time of toasting according to the inside temperature of the toaster chamber. Hara shows a toaster having a controller, which controls the toasting time according to the temperature and the elapsed time since the end of previous toasting (see all the Figures and the English abstract). Wanat also shows that it is well known in art of toasters to use a thermal sensor (76) positioned at the toaster chamber 30 to adjust the length of the toasting cycle to compensate the varying temperature in the toasting chamber with the use of a processor unit 70 (see Figures 3 and 4, col. 2, line 54 – col. 3, line 20 and col. 6, line 37 – col. 7, line 20). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify APA to position a thermal sensor in the toaster chamber to monitor the temperature of the toaster chamber to determine the total toasting time period taking the toaster function and the toaster chamber temperature into consideration for better heating control to achieve a better toasted product, in view of the teaching of Hara or Wanat. Consequently, Admitted Prior Art (APA) combined with Hara or Wanat shows every feature as claimed except that it does not explicitly show that the level is a voltage level for the resistance heater of the toaster. Devlin shows that it is well known in the art of electrical toasters to set the degree of toasting by adjusting the voltage level of the resistance heaters (see Figures 1-4, col. 6, line 27 – col. 7, line 2 and col. 9, lines 37-52). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify APA combined with Hara or Wanat to set the voltage level of the resistance heaters of the toaster to adjust the toasting level which is a factor of the total toasting time according to the user's preference, in view of the teaching of Devlin.

Therefore, the microprocessor of the toaster is controlled to have a total toasting time according to all these factors: toaster, function, inside temperature and the voltage level according to the combined teachings of all these references. To separately determine different heating periods before combine them into a total resultant time period would have been a mere intermediate step of programming the control method but adds little patentability weight to the claimed combined toaster and microwave oven.

5. Claims 2, 5-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art as shown in Figure 2 (APA), in view of Hara (JP 6-141982) or Wanat et al (US 5,802,957) and Devlin (US 5,126,536), as applied to claims and 1 and 4 above, and further in view of Lanno et al (US 5,128,521) (previously cited).

As set forth above, the Admitted Prior Art (APA) combined with Hara or Wanat and with Devlin shows every feature as claimed except for the use of a time counter for measuring the elapsed time period from the end of the last operation of the toaster. Lanno shows a toaster with a microcomputer controller for controlling the degree of toasting according to the color of the toast (toast levels), kind of cooking and a time counter to measure the elapsed time between the end of the previous cycle and the beginning of the new cycle (see the abstract and Figure 1 and the program flowcharts as set forth in Figures 2-12). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify APA as modified above to control the toasting operation according to the kind, the toast voltage level and the time elapsed between toasting operation for better toasting control and result, in view of the teaching of Lanno.

6. Applicant's arguments filed 6-26-2006 have been fully considered but they are not persuasive. As previously set forth, the Admitted Prior Art clearly shows the claimed microwave oven with a toaster having the basic features as claimed. The use of well known toaster factors for control the heating time is well known. More particularly, the use of a temperature sensor is clearly shown by Hara or Wanat. In Hara, it clearly states "the heating time deciding means 8 determines the heating times by the temperature T given by the temperature sensing element 4 and the elapsed time (t) since the end of the previous toasting given by the clock means 6" in the English abstract. In Wanat, it states at col. 6, lines 64-67:

During the toasting cycle, processor unit 70 monitors the temperature in toasting chamber, via thermistor 76, and adjusts the length of the toasting cycle accordingly in order to toast bread at the user selected settings.

To set the degree of toasting by adjusting the voltage level of the resistance heaters is well known in electrical toasters as shown by Devlin (see Figures 1-4, col. 6, line 27 – col. 7, line 2 and col. 9, lines 37-52). To adjust the heating time according to when the toaster was last operated is clearly taught by Lanno. It would have been readily obvious to one of ordinary skill in the art to combine these well known features to control the overall heating time of the toaster by programming the microprocessor of the toaster to determine a total toasting time according to all these factors: toaster, function, inside temperature and the voltage level according to the combined teachings of all these references. Again, to separately determine different heating periods before combine them into a total resultant time period would have been a mere intermediate step of programming the control method but adds little patentability weight to the claimed combined toaster and microwave oven. Furthermore, Lanno clearly teaches that it is old in the art of toasters to determine the toasting time cycle by the selected toast color and the

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elapsed time since the last toast cycle as shown in the flow charts in Figures 7-12 and description of the operation set forth from col. 5, line 55 – col. 18, line 51. Although Lanno does not explicitly disclose a total toasting time period in accordance with three separate time periods, namely, a first, a second and a third time periods as claimed, Lanno clearly sets a total heating period using tables of toaster cycle times and a toast cycle time is selected from the tables depending upon other factors including the elapsed time between the end of the previous cycle, the modes (food types), the color (heating level) as clearly set forth in the TABLES I-V in cols.

11 and 12. Its operation can be summarized by its Abstract:

A "pop-up" toaster is controlled by a microcomputer to operate in a toast, bakery or pastry mode to toast a product to some preselected color. The microcomputer includes a memory for storing indications of the toast color selected for the present toaster cycle (TCOLOR), the toast color selected for the previous toasting cycle (TLAST), the mode selected for the present toasting cycle (MODE) and the previous toasting cycle (LMODE) as well as tables of toaster cycle times and tables of compensation values. The microcomputer counts the number of toaster cycles occurring within a predetermined time of the start of the present cycle (TCYCLE) and also develops an indication (TINT) representing the elapsed time between the end of the previous cycle and the beginning of the present cycle. A toast cycle time is selected from the tables depending upon TCYCLE, TINT and TCOLOR. The selected toast cycle time is then modified in various ways depending on MODE, LMODE, the relation of TCOLOR to TLAST, and the magnitude of TINT and TCOLOR. The modified value of toast cycle time is then used by the microcomputer to terminate power to the heating elements of the toaster after the toast cycle time has expired.

And at col. 18, lines 52-64:

From the foregoing description it is seen that a toaster constructed in accordance with the principles of the present invention includes means for digitally controlling toast cycles in a toast, pastry or bakery mode to accurately toast a product to a predetermined color. The timing of cycles is accomplished by wholly digital means and means are provided to compensate for various factors affecting the initial temperature of the toaster at the beginning of a cycle. Such factors include the elapsed time between the last cycle and the present one, the mode of the last cycle, the color to which the

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product was toasted during the last cycle, and the number of cycles within the last ten minutes.

Therefore, the total toasting time period in the combined references clearly reflect the three periods as claimed as they use the food type (such as the mode in Lanno for the first time period) and a level of bread toasting (such as toasting color for the second time period) together with time adjustment according to elapsed time (for the third time period) taught in Lanno as set forth above. Although Lanno does not specify that the toasting color is related to a voltage level of the electrical heater, Devlin clearly teaches the same as it states at col. 9, lines 37- 52:

Thus, the electronics of the toaster provides facility for establishing an initial reference to standard (i.e., maximum light reflection of the bread to be toasted) against which successively increasing degrees of brownness (i.e. instantaneous light reflection of the surface of the bread as it is being browned) will be measured to obtain a browning signal which is compared with a user-set voltage level representative of the desired level of brownness. A match between the browning signal and the user-set voltage level results in a shut down of the heater elements and ejection of the browned bread. Also, by establishing the reference or standard based on maximum light reflectivity of the particular bread to be browned, different types of bread (white, rye, wheat, etc.) can be effectively toasted to the same degree of brownness.

More particularly, “the brownness” of the toast in Devlin is the same as “the color” in Lanno, therefore, it would have been obvious to use a voltage level to set the toasting color as one of the set time periods in APA combined with Lanno following the teaching of Devlin. Furthermore, the obviousness double patenting rejection should be addressed in response to this Final Office action.

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7. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H. Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571)-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Philip H Leung
Primary Examiner
Art Unit 3742

PLeung/pl
9-5-2006